DOUBLE-CRESTED CORMORANT
Phalacrocorax auritus
STATUS: No current listing

Distribution and Movements
Double-crested cormorants breed discontinuously in the interior West, largely in northeast California and southern Oregon through northern Utah and north into Montana. They breed in the southern part of Idaho, largely on the portion of the Snake River Plain in the southeast corner of the state.

In late summer, these cormorants move in any direction away from their breeding areas, gathering in bays and estuaries before they migrate southward along coastlines, river valleys, and other watercourses. Birds from higher altitude lakes may migrate to lower areas. Wintering areas include the Pacific coast, the Gulf of Mexico, and the Rio Grande river valley south into Mexico; some winter over on open areas below dams on the Snake River in Idaho. Timing of spring migration varies from year to year; dates range from March to April.

Habitat and Nesting
General nesting habitat for Double-crested Cormorants includes freshwater lakes and their islands, ponds, rivers, and sloughs. Nesting sites are sometimes shared with gulls, making the cormorant nests susceptible to predation. To be successful, nest sites must be undisturbed by humans or mammalian predators, and a food source must be within 5-10 miles (8-16km) of the colony.

Nest sites include rocks, islets, islands, swamps, and steep cliffs facing the water. Nests are placed either on the ground or in trees at almost any height. The nests are constructed from sticks, algae, and other materials, and may be up to 24 inches (60cm) in diameter and the same in height, although many are lower. The nest depression is generally 9 inches (22cm) across and up to six inches (15cm) deep. Clutch sizes range from 2-7 eggs; 3-4 eggs is the most usual size.

Food is mostly fish, with some crustaceans, amphibians, and aquatic insects. In the Great Basin, these cormorants eat mostly "rough fish" of little interest to anglers: carp, perch, chub and suckers (Ryser 1985). Cormorants may dive to a depth of 60 feet (20m) in pursuit of fish (Knopf and Kennedy 1981).

Survey Results
In 1993, we found 11 colonies of Double-crested Cormorants, as opposed to the five reported for the 1984 survey (Trost 1985). In part, this increase is due to a better response to our questionnaire, for which we are appreciative.

One of the best ways to census cormorants is to conduct a dawn or dusk flight rate count. Our estimates at Minidoka NWR corresponded quite well with an actual nest count. The best time to conduct flight counts would be before the eggs hatch, since

after the young are well developed the counts will reflect some nests with both parents departing. As long as their reproduction date is taken into consideration, however, flight counts can be made any time in June or July.

In general, cormorants are doing well in Idaho. Their large populations are probably being maintained by high numbers of non-game fish in irrigation reservoirs.

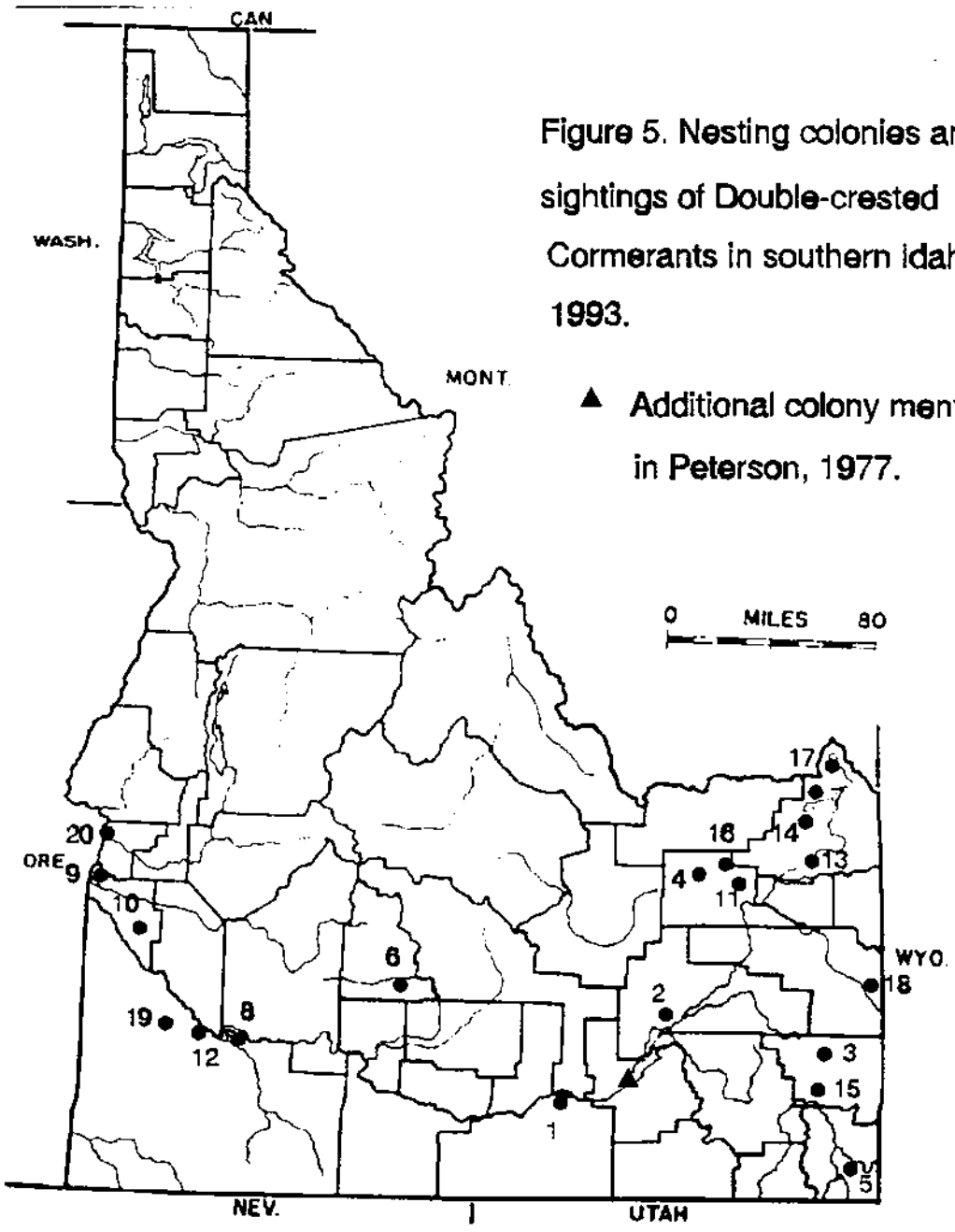

Figure 5. Nesting colonies and sightings of Double-crested Cormerants in southern Idaho, 1993.

▲ Additional colony mentioned in Peterson, 1977.

Table 5. Nesting Locations and Sightings of Double-crested Cormorants in Southern Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
1	Minidoka NWR	42.40-113.20 (T9S,R26E,S5)	-	268	6-22	Many large chicks are begging from their parents on Gull Island. Flight rates are 138/hr into and off the island.	This Study
1	" "	" "	-	806	6-24	Flight rates at dawn were 806/hr leaving Gull Island. Most were heading into the wind, to the west.	" "
1	" "	" "	-	240-468	7-5	The combined flight rates onto and away from Gull Island varied between 240/hr at 1130 hrs. and 468/hr at 1215 hrs.	" "
1	" "	" "	400-450	-	8-19	A ground count on the perimiter of Gull Island indicates at least 400 cormorant nests.	" "
2	American Falls Res.	42.59-112.36 (T5S,R33E,S36)	-	26	6-8	These birds flew by the mouth of the Snake River in an hour.	" "
2	" " "	" "	-	282	6-9	A dusk flight count at the mouth of the Portneuf resulted in 282/hr leaving and entering the colony.	" "
2	" " "	" "	-	13	6-11	Flights over the Snake R. mouth.	" "
2	" " "	" "	15-20	596	6-17	There are 15-20 nests in willows by the mouth of the Snake R. The flights into and out of the main colonies amounted to 596/hr.	" "
2	" " "	" S21	350-400	796	7-1	A dawn count of birds leaving the colony from the bluffs above the Portneuf R. resulted in 796/hr.	" "
2	" " "	" "	70-80	-	7-2	I canoed along the eastern edge of the reservoir & found 70+ new nests half way across the lake.	" "
2	" " "	" S36	-	25	7-19	Mouth of the Snake R., foraging.	" "
3	Blackfoot Res.	42.56-111.37 (T6S,R41E,S11)	-	200+	6-19	Long Island has 20+ nests and Gull Island has 10+ in the trees, as well as many more on the ground. The Spring Island colony is empty.	L. Hlavaty

Table 5, cont. Nesting Locations and Sightings of Double-crested Cormorants in Southern Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
3	Blackfoot Res.	42.56-111.37 (T6S,R41E,S11)	60-80	-	7-4	About 40 nests are on top of Gull Island and another 20 in the trees on Long Island.	This Study
3	" "	" "	-	15-20	8-3	Young birds still on Gull Is.	" "
3	" "	" "	-	50-75	8-11	These nearly full grown chicks huddled near the top of Gull Is.	" "
4	Mud Lake WMA	43.53-112.25 (T7N,R37E,S34)	-	1	6-11	Only one cormorant seen.	" "
4	" " "	" "	-	-	6-15	The old colony site has only 2-3 active nests, but an IF&G expert, Don Kemner, said there are 200+ nests along the north shore.	" "
4	" " "	" "	-	91	6-25	All nests visable from the observation were counted. The numbers per nest were 2,2,2,3, 2,3,& 3 (mean = 2.4/nest).	" "
4	" " "	" "	65-85	-	7-9	Two colonies counted - one near the tower and the other further out near open water.	" "
4	" " "	" "	-	-	7-21	Most are fledged, but these 9 are on the nests still.	" "
5	Bear Lake NWR	42.09-111.20 (T15S,R44E,S34)	25-35	60	7-8	Small colony on west end of Rainbow Island. About 35 young are produced a year.	R. Sjostrom
5	" " "	" "	-	4	6-21	Only 4 cormorants seen flying while watching an hour at dusk.	This Study
6	Mormon Reservoir	43.15-114.50 (T2S,R14E,S19)	5-10	5	6-13	Birds flushed off the south shore of Gull Island, probably off nests.	" "
7	Island Park Res.	44.25-111.36 (T13N,R42E,S36)	-	3	6-29	Flying along west end of res.	" "
7	" " "	" "	60-80	60+	7-17	A large colony on the south end of the island, also five nests on each side. Young large, 2-3 per nest.	" "

Table 5, cont. Nesting Locations and Sightings of Double-crested Cormorants in Southern Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
8	C. J. Strike Res.	42.50-115.45 (T6S,R5E,S5)	-	1	5-28	Flying down river.	This Study
9	Fort Boise WMA	43.40-117.01 (T6N,R5W,S36)	-	5	5-30	Flying up & down river.	" "
10	Deer Flat NWR, Lake Lowell	43.40-116.45 (T3N,R3W,S33)	5-10	10	6-2	On the Lake Lowell Sector there are seven nests seen on Gosling Island, where W. Stanley reports 30 nests.	" "
10	" " "	" "	25-35	1-200	5-26	On an island with herons.	W. Stanley
11	Market Lake WMA	43.47-112.10 (T5N,R37E,S6)	-	4	6-7	On a fill island in the marsh.	This Study
11	" "	" "	-	8	6-24	All seen from near the Ibis colony.	" "
11	" "	" "	-	19	6-19	Seen while walking around the edge of the ibis colony.	" "
11	" "	" "	-	5	7-3	Walk around the entire main marsh.	
12	Stork Island	42.50-116.1 (T5S,R3E,S14)	-	20+	6-10	In Grandview area Snake R., with night-herons and GBH. In four Cormorant nests there were 3 nests w/ 4 young and 1 with 3 (mean = 3.75).	" "
12	" "	" "	10-20	40	6-1	Nests hidden in the vegetation of Stork Island. Small young in nests. Scoped from river bank.	J. Doremus
13	Mesa Falls Marsh	44.10-111.10 (T10N,R44E,S18)	-	1	6-28	One bird on 10+ acre pond.	This Study
14	Harriman St. Park	44.20-111.30 (T12N,R43E,S27)	-	1	6-29	On Silver Lake.	" "
14	" " "	" "	-	1	7-16	" " " "	" "
15	Alexander Res.	42.40-111.45 (T9N,R41E,S11)	-	4	7-4	Resting on shore.	" "
16	Camas NWR	43.59-112.16 (T5S,R33E,S30)	-	present	6-16	Seen on Ray's lake.	G. Deutcher
16	" "	" "	-	2	7-5	On Ray's Lake, resting.	This Study

Table 5, cont. Nesting Locations and Sightings of Double-crested Cormorants in Southern Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
17	Henry's Lake	44.45-111.20 (T44N,R43E,S31)	-	25	7-17	On n.w. shore, no nests seen.	This Study
18	Palisades Res.	43.08-111.03 (T3S,R46E,S36)	-	33	6-18	Roosting on new dike at s. end.	" "
19	Foreman Res.	42.55-116.30 (T5S,R1E,S3NW)	5-6	10-12	4-8	In old GBH colony, new this year.	M. Mathis
20	Deer Flat NWR, Snake River	44.12-117.05 (T7N,R5W,S22)	80-90	300	5-26	Large colony on Goshling Island, in the Snake River Sector.	W. Stanley

Total Range in Cormorant Nests = 1,175-1,401

GREAT BLUE HERON
Ardea herodias
STATUS: No current listing

Distribution and Movements
The Great Blue Heron breeds locally throughout the northwest; pre-breeders and nonbreeders may be present during breeding season in areas where there is no actual breeding. In Idaho, Great Blue Herons breed in suitable habitat throughout the state. They tend to be highly traditional in their use of nest sites unless disturbance occurs during the egg-laying period. Several colonies of herons are known to have been deserted after Bald Eagles settled in the area.

Post-breeding dispersal occurs as soon as the young are able to fly; this dispersal can be in any direction from the breeding area. In the fall, there is a general southward migration, but breeding age individuals sometimes remain as far north as British Columbia, Wyoming, and Idaho. Wintering birds remain locally on areas of open water. In the spring, migration stretches from February to May. Migration is largely diurnal.

Habitat and Nesting
Feeding takes place around bodies of water in wet meadows, pastures, and dry fields, and prey consists of various fishes (mostly non-game), amphibians (largely frogs), snakes, small mammals, etc. Great Blue Herons generally hunt using stand-and-wait tactics or by slowly stalking prey, but have been seen stealing food from other birds, as well as stalking red phalaropes (*Phalaropus fulicaria*) in shallow water (Merrifield 1992).

Breeding areas usually contain old nests, and are located by shallow areas of either salt or fresh water, such as the edges of lakes. Nest placement is variable, and nests can be found both in tall trees and in tule rushes. New nests are small platforms of sticks as small as 18 inches (45cm) in diameter, while older nests can be 36-48 inches (90-120cm) across, with an inner depression 10 inches (25cm) in diameter. Clutch size ranges from 1-7 eggs; usually 3-5 eggs are laid.

Survey Results
The Great Blue Heron continues to be the most widespread and successful ciconiform in Idaho. We did not attempt to census the northern Idaho colonies, since they are apparently not threatened. We also did not make an April aerial survey for this species prior to leaf-out, which probably reduced our accuracy in measuring colony sizes and locations in southern Idaho. Flight rate counts on this species are not especially reliable, as there is no dawn and dusk surge in their departures or arrivals at colonies. Nevertheless, we feel that we have obtained an adequate measure of their colony dispersion and sizes. Numbers seem comparable to those reported in the 1984 survey (Trost

1985), and we finally obtained a measure of the huge colony on Thurman Ridge in the area of Island Park Reservoir. This colony is similar to the one above Palisades Reservoir, with herons nesting high in Douglas fir trees at traditional sites.

Changes that can occur on a local level due to species interactions and human disturbance were elucidated through input from Mike DeLate, a resident of Teton Valley. One of the colonies there currently consists of only a single nest, which hardly qualifies as a "colony". Other mating herons from the colony responded to the presence of a Bald Eagle (*Haliaeetus leucocephalus*) and moved their nests approximately 0.5 miles to the north. The local landowner bulldozed the cottonwoods, causing the herons to move a second time, after which they presumably brought off at least some young.

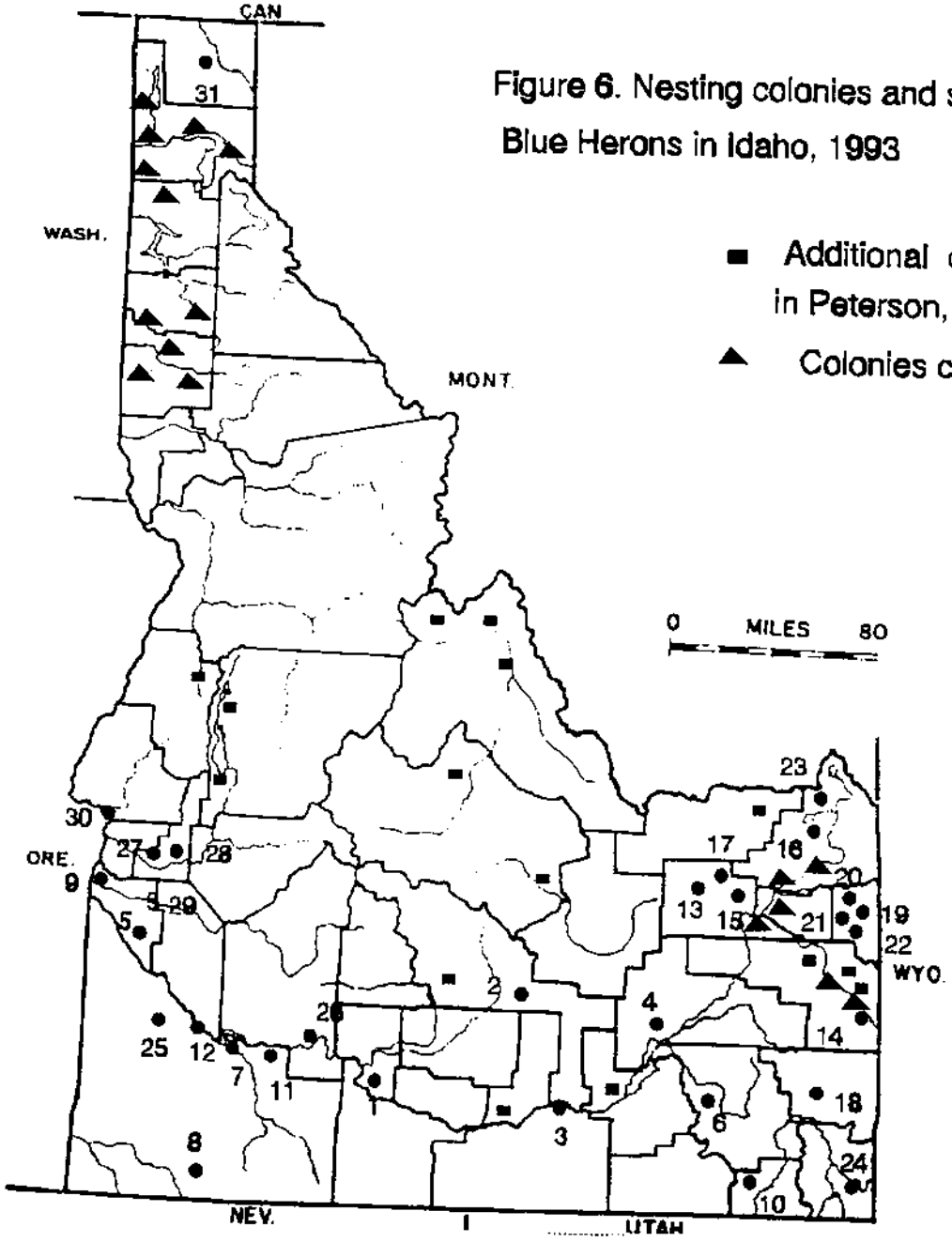

Figure 6. Nesting colonies and sightings of Great Blue Herons in Idaho, 1993

■ Additional colonies mentioned in Peterson, 1977.

▲ Colonies cited in Trost, 1984.

Table 6. Nesting Locations and Sightings of Great Blue Herons in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
1	Thousand Springs	42.41-114.50 (T8S,R14E,S19)	-	23	5-30	In the colony at the mouth of Salmon Falls Creek. many large young are begging. Flight rate was 23/hr.	This Study
1	" "	" "	50-70	-	6-3	Nests counted by scope in winter.	J. Klott
2	Silver Creek	43.25-114.10 (T1S,R19E,S14)	18-22	20	6-12	Nests in tall cottonwoods just n. of US 20, 5 miles w. of Picabo.	This Study
3	Minidoka NWR	42.40-113.20 (T9S,R26E,S5)	35-40	-	6-22	In trees s. of the dike near Gull Island. Young large.	" "
3	" "	" "	-	21	6-24	Flight rate was 21/hr at dawn.	" "
4	American Falls Res.	42.59-112.16 (T5S,R33E,S36)	-	8	6-8	Flight rate was 8/hr at McTucker Springs area between 0930-1030.	" "
4	" " "	" "	-	14	6-11	Flight rate was 14/hr at McTucker Springs area between 1250-1350.	" "
4	" " "	" "	-	9	6-15	McTucker Springs area, flight rate was 9/hr.	" "
4	" " "	" "	-	15	6-17	While paddling along the eastern edge of the res., 15 flew over.	" "
4	" " "	" "	35-50	27	7-2	Seen while canoeing up Snake R. near McTucker Springs.	" "
4	" " "	" S21	-	5	7-14	Five/hr at Siphon Pond heading west at the Portneuf River.	" "
4	" " "	" S36	-	9	7-19	Flight rate was 9/hr at McTucker.	" "
5	Deer Flat NWR, Lake Lowell	43.40-116.45 (T3N,R3W,S33)	-	1	6-2	Lake Lowell, nesting almost over, a few young are still in the nests, near Access 506.	" "
5	" " "	" "	38	100	5-26	Lake Lowell.	W. Stanley
6	McCammon	42.40-112.25 (T9S,R36E,S27)	9	12	6-3	In dead trees on west side of the valley, young 2/3rds grown.	This Study
7	C. J. Strike Res.	42.50-115.45 (T6S,R5E,S5)	-	2	5-28	Flight rate = 2/hr at Loveridge Bridge (Hwy 51).	" "
7	" " "	" "	10	25+	6-9	Eighteen young counted in the 10 nests, and at dusk 20-25 adults here.	" "

Table 6, cont. Nesting Locations and Sightings of Great Blue Herons in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
7	C. J. Strike Res.	42.50-115.45 (T6S,R5E,S5)	12	20	6-8	Herons on ground, hard to count from mainland. On islands below the bridge.	J. Doremus
8	Duck Valley Indian Reservation	41.59-116.00 (T16S,R2E,S11)	14+	14	5-28	Mountain View Res. - not sure where the heron colony is, but flight rate was 14/hr heading s.w. of the reservoir.	This Study
9	Fort Boise WMA	43.40-117.01 (T6N,R5W,S36)	-	5	5-30	Flying up & down the Boise R.	" "
10	Oxford Slough WPA	42.15-112.02 (T13S,R38E,S35)	-	1	6-5	One GBH over the main marsh.	" "
10	" "	" "	-	2	6-17	Flight rate was 2/hr over marsh.	" "
10	" "	" "	-	6	6-22	Flight rate = 2/hr at 2 spots.	" "
10	" "	" "	14	14	6-23	Adults flushed from nests, chicks almost full grown.	" "
11	Bruneau Dunes Lake	42.50-115.35 (T6S,R6E,S13)	-	5	6-9	All perched in cottonwood trees, at least one is a juvenile.	" "
12	Stork Island	42.52-116.00 (T5S,R3E,S14)	-	10	6-1	Grandview area, probably more, as hidden in veg.	J. Doremus
12	" " "	" "	7+	10	6-10	Float around Stork island in canoe, 12 empty nests, GBH # = 3, 2, & 1/nest.	This Study
13	Mud Lake WMA	43.53-112.25 (T7N,R37E,S34)	-	1	6-12	North side, flight rate = 1/hr.	" "
13	" " "	" "	-	3	6-14	Overhead near the Ibis colony.	" "
13	" " "	" "	-	4	6-15	South side, Flight rate = 4/hour.	" "
13	" " "	" "	-	2	6-25	Counted on east side of Ibis colony	" "
13	" " "	" "	-	3	6-25	Near tower on n. side, in the area of cormorant colony.	" "
13	" " "	" "	-	2	7-9	In west marsh, 2 overhead.	" "
13	" " "	" "	-	3	7-21	Seen from south dike.	" "
13	" " "	" "	10-15	-	6-10	On north side, by tower.	D. Kemner
14	Palisades Res.	43.08-111.03 (T3S,R46E,S36)	-	17	6-18	Flushed off dikes at s. end.	This Study
14	" "	" "	57+	11+	6-19	On hill to east, 11 nests had chicks (9 w/2, 2 w/1).	" "

Table 6, cont. Nesting Locations and Sightings of Great Blue Herons in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
14	Palisades Res.	43.08-111.03 (T3S,R46E,S36)	20-30	-	6-19	In Swan Valley, near Kelley's Island, on South Fork.	This Study
15	Market Lake WMA	43.47-112.10 (T5N,R37E,S6)	-	2	6-24	Near Ibis colony, foraging.	" "
15	" "	" "	-	1	6-24	One bird flushed from the marsh.	" "
16	Island Park Res.	44.25-111.36 (T13N,R42E,S36)	75+	150	6-29	On Thurman Ridge, west of the dam. A "huge cloud" of herons took off when he entered the colony.	M. Mickelson
17	Camas NWR	43.54-112.16 (T7N,R36E,S30)	-	14	6-29	Counted on Ray's Lake.	G. Deutcher
17	" "	" "	-	6	6-29	Seen feeding in canals.	This Study
17	" "	" "S18	-	5	7-5	Seen near Two-way Pond	" "
17	" "	" "S30	15	18	7-8	Flushed off nests at Ray's Lake	" "
18	Blackfoot Res.	42.56-111.37 (T6S,R41E,S11)	25+	50	6-19	Nesting on Gull Island. No nests in old colony on Spring Island.	L. Hlavaty
18	" "	" "	2	4	7-4	Two nests on e. side Gull Island.	This Study
18	" "	" "	10+	15+	8-11	Fleging young scrambling to get away from me on Gull Island.	" "
19	Tetonia	43.40-111.08 (T6N,R45E,S22)	4	-	7-17	Young already fledged.	M. DeLate
20	Felt	43.45-111.09 (T6N,R45E,S17)	1	-	7-17	One nest along Badger Creek.	" "
21	Pack Saddle Rd.	43.35-111.10 (T6N,R45E,S12)	20+	-	7-17	On Teton River, about 1/4th mile south of Packsaddle Rd.	" "
22	West of Driggs	43.30-111.10 (T6N,R45E,S33)	17	-	7-17	Bald Eagles moved in the colony s. of Horseshoe Rd., which caused the herons to move to the n. A rancher bulldozed the trees, so the herons moved again, this time to the Pack Saddle colony.	" "
23	Island Park Res.	44.25-111.36 (T13N,R42E,S36)	5+	10	7-17	Nests seen on s. side of island in the west arm, with cormorants.	This Study
24	Bear Lake NWR	42.11-111.19 (T14S,R44E,S34)	15	30	7-9	In Mud Lake area. About 20 young raised.	R. Sjostrom
24	" " "	" "	70	140	7-9	Near Dingle on the Bear River. About 100 young raised (1.5/nest).	" "

Table 6, cont. Nesting Locations and Sightings of Great Blue Herons in Idaho, 1993.

Map *	Location	Lat-Long. (TRS)	* Nests	* Birds	Date	Comments	Source
25	Foreman's Res.	42.55-116.30 (T5S,R1E,S3NW)	6	12	6-17	Old GBH colony, cormorants moved in this year & fewer herons are here now.	M. Mathis
26	Glenns Ferry	42.50-115.25 (T5S,R9E,S34NE)	12	24+	6-3	On island in Snake R. w. of Slick Bridge.	J. Klott
27	Emmett	43.50-116.20 (T6N,R1W,S9)	20	-	5-26	On Smith Island, about a mile downstream from Emmett.	A. Ogden
28	Montour WMA	43.52-116.18 (T6N,R1W,S33)	10-15	-	5-26	About 1/2 mile below the Montour bridge, e. of Emmett.	" "
29	Boise River	43.40-116.50 (T4N,R1W,S12)	20+	-	5-26	Several small colonies along the river between Boise & Caldwell. Not adequately censused.	" "
30	Deer Flat NWR, Snake River	44.12-117.05 (T7N,R5W,S22)	110	500	6-2	On islands in the Snake River Sector of the refuge (Gosling-86, Feral-16, & Silo-8). There is also a colony on the Snake R. between Notus and Parma, with 22 nests last summer.	W. Stanley
31	Kootenai NWR	48.42-116.10 (T62N,R2E,S13)	35-40	-	6-29	The colony is about 6 miles e. the refuge.	J. Reynolds

Total Range in Great Blue Heron Nests: 801-983

BLACK-CROWNED NIGHT-HERON
Nycticorax nycticorax
STATUS: No current listing

Distribution and Movements
Black-crowned Night-herons breed from southern Washington, Oregon, and southern Idaho southward to the Mexican border. In Idaho, breeding occurs from the northern edge of the Snake River Plain southward.

Post-breeding dispersal carries individuals well away from the limits of the breeding range. These herons winter southward into Mexico, although individuals have wintered in Oregon and in Utah at the Bear River Refuge. In southern Idaho, birds have wintered at Thousand Springs.

Numbers of Black-crowned Night-herons were depleted in the late 1970's and early 1980's due to organochlorine pesticide contamination (Findholt and Trost 1979, Henny et al. 1984), but the decline may be starting to reverse in Idaho (Trost 1985) and elsewhere (Henny et al. 1985).

Habitat and Nesting
Nesting habitat is extremely varied, although almost all wading habitats are utilized. Nesting takes place in wooded habitats, but nest sites are highly variable, and may be on the ground, in tule beds, or in trees as high as 150 feet (50m). The nest itself is constructed from whatever materials are locally available, and may be concealed or open to view. Typically, nests are very close together and are found in colonies with other heron species and cormorants. Clutch size varies from 1-7 eggs; 3-5 eggs is the most common size.

Food taken includes fishes, frogs, and tadpoles as well as insects, some vegetable matter, and occasional small mammals and young birds. Black-crowned Night-herons sometimes hunt in gull colonies, taking unattended chicks.

Survey Results
Black-crowned Night-herons have continued to increase in Idaho, as predicted by Henny et al. (1984) and Trost (1985). We found over 150 more nests in 1993 than in 1984 (this in part reflects a greater survey effort).

Numbers of these herons still seem somewhat depressed, however. At Blackfoot Reservoir the colony at Spring Island was deserted, quite likely because during the drought it was connected with the mainland and heavily grazed by cattle. Herons still have not re-invaded Long Island, and a maximum of about 10 nests were found on Gull Island, which is essentially the same number as in 1984. The colony at Island Park Reservoir has begun again, but numbers are nowhere close to what they were in the mid-1970's.

However, Night-heron numbers were definitely up at Thousand Springs, where they have increased two or three-fold since 1984. Our survey also disclosed a colony at Duck Valley Indian Reservation that was not known in 1984.

In the Magic Valley, trout hatcheries are probably responsible for much of the Night-heron mortality in the area, and should be forced to put bird-proof cages around their young fish. This seems to be the only way to protect both fish-eating birds and their concentrated prey at these hatcheries.

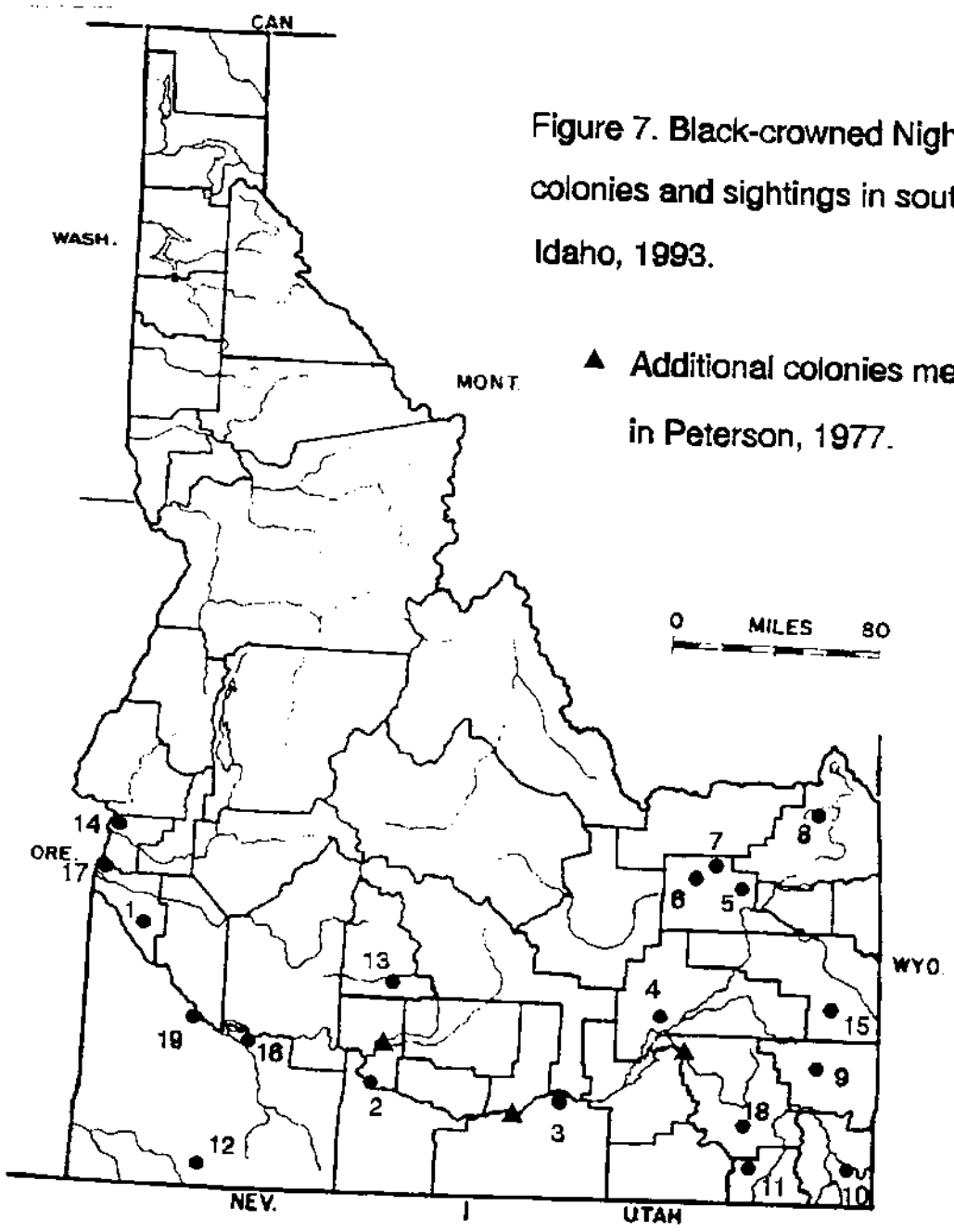

Figure 7. Black-crowned Night-Heron colonies and sightings in southern Idaho, 1993.

▲ Additional colonies mentioned in Peterson, 1977.

Table 7. Nesting Locations and Sightings of Black-crowned Night-Herons in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
1	Deer Flat NWR Lake Lowell	43.40-116.45 (T3N,R3W,S33)	10	50	5-26	Two small colonies are now on Lake Lowell.	W. Stanley
1	" " "	" "	1	2	6-3	Some isolated nests around Lake Lowell, not particularly colonial.	This Study
2	Thousand Springs	42.41-114.50 (T8S,R14E,S19)	300-350+	450	5-30	Flight rate = 450/hr heading down the Snake R. at dusk. Many of the first birds were yearlings, later adults left.	" "
3	Minidoka NWR	42.40-113.20 (T9S,R26E,S5)	20-35+	2	6-22	Many nests along edge of Gull Is., as well as the edge of the mainland and the small island to w. of Gull. Also some nests in the slough to the s. of the dike road.	" "
3	" "	" "	-	15	6-24	Flight rate = 15/hr at dawn off Gull Island.	" "
3	" "	" "	-	10	7-5	Fledged young were flying around.	" "
4	American Falls Res.	42.59-112.36 (T5S,R33E,S36)	-	3	6-8	Flight rate = 3/hr near McTucker Springs (0930-1030).	" "
4	" " "	" "	-	6	6-9	Flight rate = 36/hr, 2010-2020.	" "
4	" " "	" "	-	2	6-11	McTucker Springs area, midday.	" "
4	" " "	" "	-	1	6-15	McTucker area, 1/hr, 1845-1945.	" "
4	" " "	" "	30-50	12	7-2	Flushed from debris in the Snake River, near McTucker.	" "
4	" " "	" "	-	7	7-10	At Siphon Road at dusk.	
4	" " "	" "	-	8	7-19	Flushed along the Snake River, a few were this year's birds.	" "
5	Market Lake WMA	43.47-112.10 (T5N,R37E,S6)	-	4	6-7	Flying over the marsh at noon.	" "
5	" " "	" "	10-15	11	6-24	Flushed off marsh near the Ibis colony, main marsh.	" "
5	" " "	" "	-	9	6-24	Seen near the Ibis colony.	" "

Table 7, cont. Nesting Locations and Sightings of Black-crowned Night-Herons in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
5	Market Lake WMA	43.47-112.10 (T5N,R37E,S6)	-	1	8-4	Feeding yearling along ditch.	This Study
6	Mud Lake WMA	43.53-112.23 (T7N,R34E,S34)	15-20	1	6-14	One heron over the marsh.	" "
6	" " "	" "	2-3	-	6-15	In old colony site, most have moved north of here.	" "
6	" " "	" "	-	12	6-25	Flight rate = 12/hr between 2015-2125, near tower on n. side.	" "
6	" " "	" "	-	4	7-9	On the marsh, also while in canoe.	" "
6	" " "	" "	-	10	7-21	Along s. dike, young flying now.	
7	Camas NWR	43.54-112.16 (T7N,R36E,S30)	-	18	6-29	In colony along Camas Cr. at Ray's Lake, counted from airboat.	G. Deutcher
7	" "	" "	-	5	7-5	Flushed out of Two-way Pond.	This Study
7	" "	" "	25-30	36	7-8	Flushed from colony at Ray's Lake, Flight rate = 24/hr.	" "
8	Island Park Res.	44.25-111.35 (T13N,R42E,S36)	5-10	4	7-17	On s. end of the island in the west arm. Nesting with GBH & night-herons. Same colony as in the 1970's, but deserted for years.	" "
9	Blackfoot Res.	42.48-111.38 (T6S,R41E,S11)	10+	-	6-19	On Gull Island, but <u>not</u> in old colony on Spring Island.	L. Hlavaty
9	" "	" "	-	3	8-11	Three juveniles fly around Gull Island as I survey it.	This Study
10	Bear Lake NWR	42.09-111.19 (T15S,R44E,S34)	25-35	60	7-8	Nesting in tules with Ibis in Mud Lake.	R. Sjostrom
10	" " "	" "	-	1	6-21	A half-hour watch at dusk along Powerline Rd. yielded only one.	This Study
11	Oxford Slough WPA	42.15-112.02	-	8	6-5	All adults foraging in fields.	" "
11	" "	(T13S,R38E,S35)	15-30	20	6-23	Eight adults flushed off nests near the Ibis colony, flight rate was 32/hr at 1640-1655.	" "
12	Duck Valley Indian Reservation	41.59-116.00 (T16S,R2E,S29)	130	130	5-28	Birds counted sitting on nests in a colony by Hwy 51, about two miles n. of the reservation bldgs. Called "Donabahba Yogee" on map.	" "

Table 7. cont. Nesting Locations and Sightings of Black-crowned Night-Herons in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
12	Duck Valley Indian Reservation	41.59-116.00 (T16S,R2E,S29)	-	4	6-28	Only 4 night-herons by ibis, colony and five nests seen.	This Study
13	Mormon Reservoir	43.15-114.50 (T2S,R14E,S25)	8-12	12	6-13	Flushed off Gull Island, probably nesting, all but one adult.	" "
14	Deer Flat NWR Snake River	44.12-117.05 (T7N,R5W,S22)	40-50	200	5-26	Nesting under GBH on Gosling Island in this Snake River Sector of the Refuge. Also nesting on several other Refuge islands, but numbers less than 10 nests/island.	W. Stanley
14	" " "	" "	-	2	6-30	Both birds seen near Smith Island.	This Study
15	Gray's Lake NWR	43.01-111.27 (T3S,R43E,S4)	-	1	5-26	One adult flushed from east side	" "
16	C. J. Strike Res.	42.50-115.45 (T6S,R6E,S5)	10	-	6-3	On the WMA, nests not verified.	J. Klott
16	" " "	" "	-	1	5-28	One adult seen from Hwy 51 bridge.	This Study
17	Fort Boise WMA	43.40-117.01 (T6N,R5W,S36)	-	6	5-30	All adults, foraging.	" "
18	Downey Sewage Lagoons	42.25-112.07 (T12S,R37E,S34)	-	1	6-5	One adult by sewage ponds.	" "
19	Stork Island	42.52-116.00 (T5S,R3E,S14)	1-3	2	6-1	Adults making food deliveries.	J. Doremus
-	Kootenai NWR	48.42-116.10 (T62N,R2E,S13)	-	present	6-29	On refuge, not known to nest.	J. Reynolds

Total Range of Nests: 657-804

SNOWY EGRET
Egretta thula
STATUS: No current listing

Distribution and Movements
Snowy egrets are generally expanding their breeding range, and currently breed from northeastern California and southern Oregon east to the western portion of Wyoming and southward to about the Mexican border. In Idaho, they breed from the Snake River Plain southward.

Post-breeding dispersal of Snowy Egrets is limited relative to that of other herons, and they usually migrate only a few hundred miles. Nonetheless, many band returns from Idaho birds have been from Mexico, and one was from Guatemala (Trost 1985). Migration occurs during both day and night.

In 1979, Snowy Egrets in Idaho were producing young at less than replacement rate, apparently due to the effects of DDE (Findholt 1984), but a 1984 survey indicated that reproduction was perhaps beginning to increase and populations to recover (Trost 1985). DDE levels have decreased in some other Western populations of Snowy Egrets (Henny et al. 1985).

Habitat and Nesting
Nesting takes place in marshy areas of fresh, brackish, or salt water. In the West, tule marshes are often used, and nests also are found in willows and bulrushes. Nests may be placed at ground level or at heights up to 30 feet (10m); 5-10 feet (2-3m) is common. The nest itself is formed of sticks a foot or two long, with lighter twigs in the cavity. Nests are generally elliptical in shape, flat, and loosely woven. Clutch size ranges from 3-6 eggs, with 3-5 eggs the most common size. Snowy egrets may nest colonially with other species of egrets and herons.

Snowy Egrets hunt in shallow water or open spaces, using stand-and-wait tactics or slowly stalking prey. In shallow water, they often startle their prey into movement by shaking one yellow foot each time they step forward. Food consists of small fishes, lizards, frogs, and snakes, as well as other animals down to the size of insects. Small mammals are sometimes eaten.

Survey Results
The cautious optimism expressed for this species in 1985 seems to have been vindicated by this survey. We found Snowy Egrets at several new locations, notably the huge colony at Duck Valley Indian Reservation. In addition, the colony at Fort Hall Bottoms in American Falls Reservoir has increased in size. However, other colonies are either quite depressed, such as Bear Lake NWR (down from 75-80 nests to 10-20), or holding steady (e.g. Oxford Slough WPA, Mud Lake WMA, and Camas NWR).

We view the status of this delicate neotropical migrant with continued cautious optimism. They need to be protected at their

nesting colonies, as well as at the ever-increasing number of fish hatcheries.

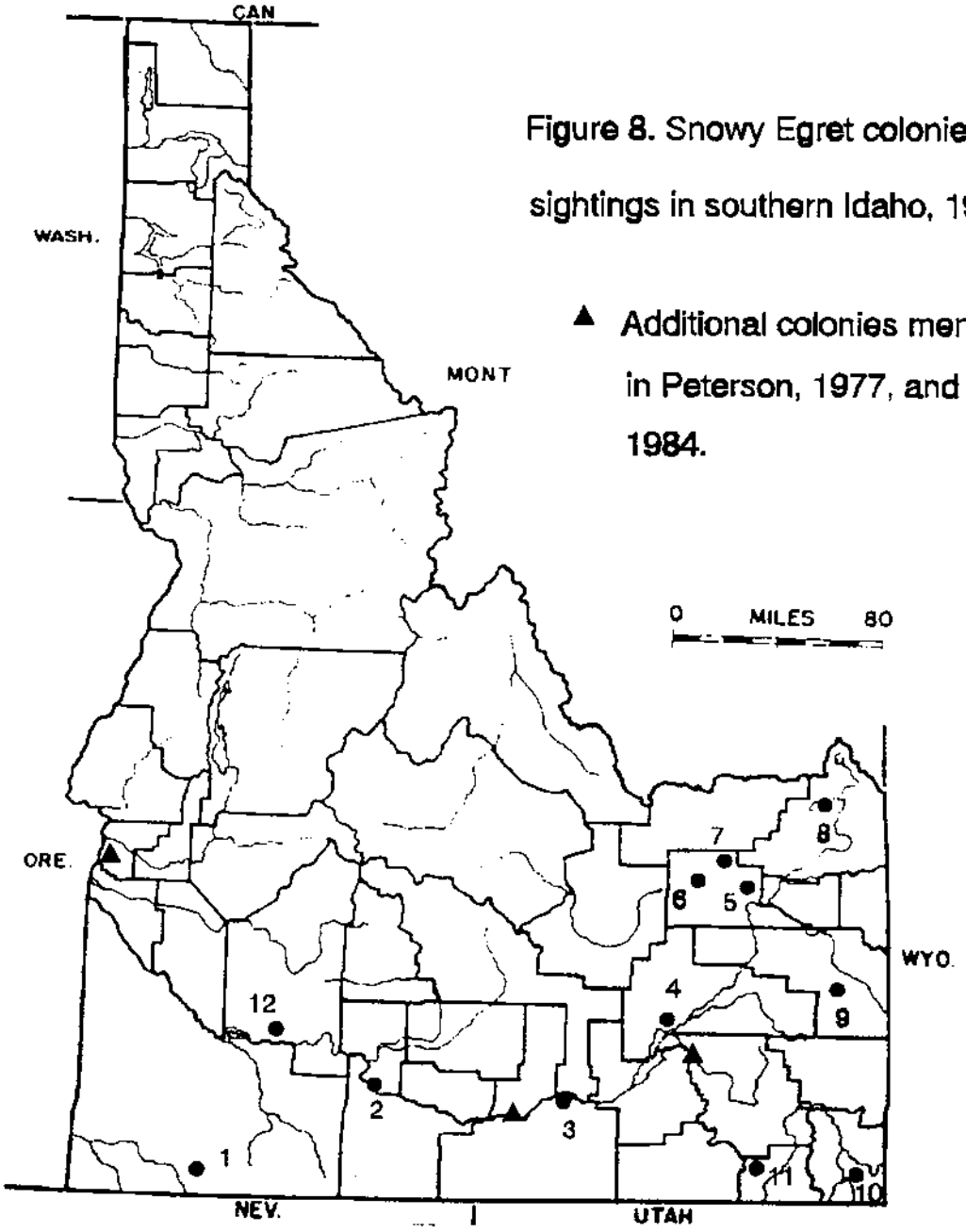

Figure 8. Snowy Egret colonies and sightings in southern Idaho, 1993

▲ Additional colonies mentioned in Peterson, 1977, and Trost, 1984.

Table 8. Nesting Locations and Sightings of Snowy Egrets in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
1	Duck Valley Indian Reservation	41.59-116.00 (T16S,R2E,S29)	131	131	5-28	Incubating birds on nests by Hwy 51, about 2 miles n. of Reservation headquarters. Called "Donabahba Yogee" on map.	This Study
1	" " "	" "	-	9	6-28	Counted in the Ibis colony	" "
1	" " "	" "	-	2	6-28	Only 1 pair of adults seen.	" "
2	Thousand Springs	42.41-114.50 (T8S,R14E,S19)	3-5	1	5-30	One egret flew into the heron colony during a dusk watch.	" "
3	Minidoka NWR	42.40-113.20 (T9S,R26E,S5)	3-7	2	6-22	Off of Gull Island. The trees along the edge are destroyed by nesting cormorants, so the egrets seem to have moved to the slough to the south.	" "
3	" "	" "	-	1	6-24	Dawn count yielded 1/hr flight rate.	" "
3	" "	" "	-	3	7-5	Foraging near Gull Island.	" "
4	American Falls Res.	42.59-112.16 (T5S,R33E,S36)	50-75	65	6-8	A feeding group in the McTucker Springs area, 26 flying over.	" "
4	" " "	" "	-	29	6-11	McTucker Springs area.	" "
4	" " "	" "	-	20	6-15	Overhead, going towards the Fort Hall Bottoms.	" "
4	" " "	" "	-	35	6-17	Feeding near McTucker Spr.	" "
4	" " "	" "	8	8	7-2	In trees by the cormorant colony at the Portneuf R. entrance. This is a new Snowy colony, separate from the one at Spring Creek.	" "
4	" " "	" "	-	8	7-19	Feeding along n.e. edge of res.	" "
5	Market Lake WMA	43.47-112.10 (T5N,R37E,S6)	-	4	6-7	Flying over the main marsh.	" "
5	" " "	" "	10-20	26	6-24	Seen near the Ibis colony. In a transect throught he Ibis colony 8 Snowys were seen.	" "
6	Mud Lake WMA	43.53-112.25 (T7N,R37E,S34)	1-2	4	6-15	A few nests in the old colony, but most egrets have moved n.w.	" "
6	" " "	" "	10-15	5	7-21	Feeding along s. dike. The nesting colony was north, near the tower.	" "

Table 8, cont. Nesting Locations and Sightings of Snowy Egrets in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
7	Camas NWR	43.54-112.16 (T7N,R36E,S30)	6-10	8	6-29	Flushed from nests by Ray's Lake colony.	G. Deutcher
7	" "	" "	-	6	7-5	Flushed by Camas Creek.	This Study
7	" "	" "	-	12	7-8	I finally find the Ray's Lake colony and count young begging.	" "
8	Island Park Res.	44.25-111.36 (T13N,R42E,S36)	-	-	7-17	No Snowys seen on Reservoir.	" "
9	Blackfoot Res.	42.56-111.37 (T6S,R41E,S11)	-	20	6-19	On Gull Island, no longer on Spring Island.	L. Hlavaty
9	" "	" "	-	1	7-4	One bird seen flying in from n.	This Study
9	" "	" "	-	7	8-3	On Gull Island	" "
9	" "	" "	8-10	15	8-11	Young counted in nests on Gull Island.	" "
10	Bear Lake NWR	42.11-111.19 (T14S,R44E,S34)	10-20	100	7-8	At least 30 young are produced in the colony on Mud Lake	R. Sjostrom
10	" " "	" "	-	3	6-19	Along Powerline Rd., w. of refuge.	This Study
10	" " "	" "	-	5	6-21	Flying into the ibis colony.	" "
10	" " "	" "	-	5	7-10	Flying n. near Dingle.	" "
10	" " "	" "	-	7	7-10	Seen while canoeing on Mud Lake.	" "
11	Oxford Slough WPA	42.15-112.02 (T13S,R38E,S35)	-	5	6-5	Feeding in the marshes.	" "
11	" " "	" "	-	25	6-22	Seen in the ibis colony.	" "
11	" " "	" "	10-20	11	6-23	Flushed off nests in ibis colony.	" "
12	Skipjack Farm Snake River	42.53-115.30 (T6S,R8E,S4)	3	6	6-3	Nests not seen, but 3 pair in the area for a month.	J. Klott
-	Deer Flat NWR, Snake River	42.12-117.05 (T7N,R5W,S22)	-	<10	5-26	Present, but not known to breed.	W. Stanley

Total Range of Snowy Nests = 250-326

GREAT EGRET
Casmerodius albus
STATUS: State of Idaho Species of Special Concern, Category B (peripheral species). Idaho Conservation Data Center rank is G5/S1 (widespread, abundant, and secure globally; critically imperiled in Idaho). Not Federally listed.

Distribution and Movements
Great Egrets breed locally in various areas of the West, particularly Oregon, Nevada, California, and Idaho. In Idaho, known breeding locations are on or south of the Snake River Plain. There is extensive post-breeding dispersal before migration to Baja California and western Mexico, although many individuals remain to winter inside the breeding range.

Over the last 50 years, there have been distinct changes in breeding areas and migration patterns of this species, and these changes are continuing. The U.S. population of Great Egrets was lowest in the early 1900's, and rebounded to a high in the 1930's. Since then, there has been an apparent gradual decline in numbers due to drainage and development as well as the loss of major heronries.

Habitat and Nesting
Breeding habitat requirements for Great Egrets include open areas, such as ponds or openings along streams or in marshes, as well as nearby woods or thickets for nesting. Great Egrets may nest colonially with other species of herons. Nests are generally placed high in trees, but in Oregon have been found in tules (*Typha*) one to four feet above the water. Nests are usually flatter and less substantial than those of the Great Blue Heron, and many lack a lined depression. Clutch sizes are from 1-6 eggs; the most common number of eggs is three.

Feeding takes place largely in fresh water marshes and ponds; prey includes fishes, frogs, salamanders, etc.

Survey Results
The Great Egret continues to be present in southern Idaho, but in low numbers. We knew of only one breeding location in 1985, at Mud Lake WMA, but now know of five and possible six more. Known nests have increased in number from 1-2 to 17-26, which is cause for some optimism. Again, it has to be noted that commercial fish hatcheries must be forced to cover their fish if we hope to see this rare species become well established in Idaho.

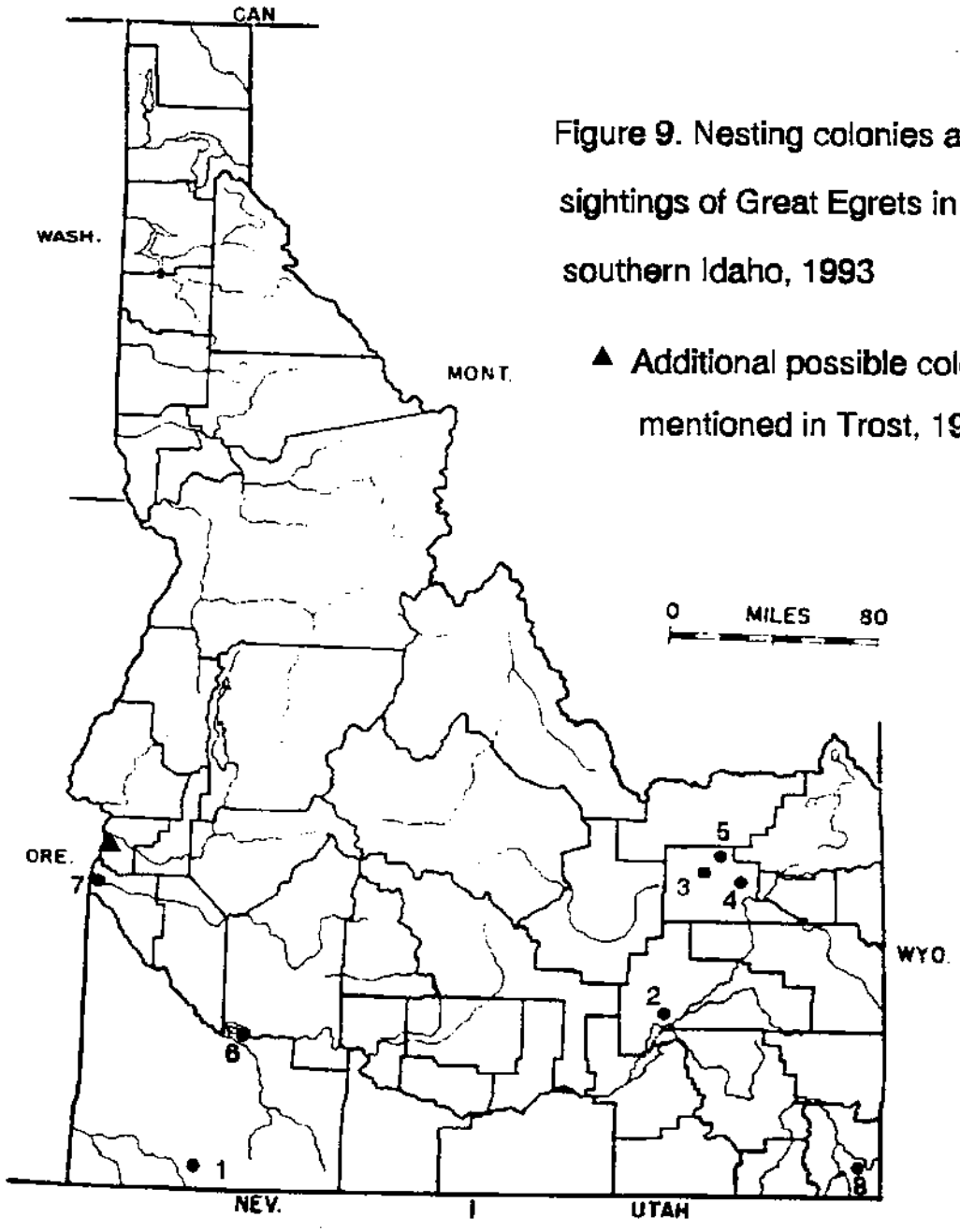

Figure 9. Nesting colonies and sightings of Great Egrets in southern Idaho, 1993

▲ Additional possible colony mentioned in Trost, 1984.

Table 9. Nesting Locations and Sightings of Great Egrets in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
1	Duck Valley Indian Reservation	41.59-116.00 (T16S,R2E,S29)	-	4	5-30	In the ibis colony by Hwy 51, about two miles north of the reservation headquarters. Sitting on nests. "Donabahba Yogee"	This Study
1	" " "	" "	-	1	6-28	Behind the ibis colony	
1	" " "	" "	3	6	6-28	Two pairs plus a nest w/ 2 young. In colony by Hwy 51.	" "
2	American Falls Res.	42.59-112.16 (T5S,R33E,S36)	4-6	2	6-11	Flying over McTucker Springs, Nesting on bottoms by Spring Cr.	" "
2	" " "	" "	-	3	6-15	Three per hour toward the bottoms.	" "
2	" " "	" "	-	1	6-17	One over McTucker Springs area.	
2	" " "	" "	-	1	7-2	Over McTucker Sp. toward bottoms.	" "
2	" " "	" "	-	1	7-19	Over McTucker Sp. to the north.	" "
3	Mud Lake WMA	43.53-112.25 (T7N,R37E,S34)	-	2	6-14	Over north shore by ibis colony. Nests out from tower.	" "
3	" " "	" "	3-6	3	6-25	Two in cormorant colony by the tower on the north shore, another over.	" "
4	Market Lake WMA	43.47-112.10 (T5N,R37E,S6)	2-3	1	6-7	Over the east marsh marsh.	" "
4	" " "	" "	-	1	6-24	Near the ibis colony.	" "
4	" " "	" "	-	1	8-4	Feeding in main canal.	" "
5	Camas NWR	43.54-112.16 (T7N,R36E,S30)	4-6	10	6-29	Counted by airboat. In dead trees by Ray's Lake.	G. Deutcher
5	" "	" "	-	1	7-5	Feeding at Sandhole Lake.	This Study
5	" "	" "	-	4	7-8	I finally find the colony, young are begging.	" "
6	C. J. Strike Res.	42.50-115.45 (T6S,R5E,S3)	1-2	1	5-28	By islands below Loveridge Bridge.	" "
7	Fort Boise WMA	43.40-117.01 (T6N,R5W,S36)	-	1	5-30	Flying over, down river.	" "
8	Bear Lake NWR	42.09-111.19 (T15S,R44E,S34)	-	2	7-8	Observed several times in late spring, not nesting.	R. Sjostrom

Table 9, cont. Nesting Locations and Sightings of Great Egrets in Idaho, 1993.

Map #	Location	Lat-Long. (TRS)	# Nests	# Birds	Date	Comments	Source
-	Deer Flat NWR, Snake River	42.12-117.05 (T7N,R5W,S22)	-	<10	5-26	Present, but not known to breed.	W. Stanley

Total Range in Great Egret Nests = 17-26